Institute of Transportation Engineers
Arizona State University

School of Sustainable Engineering and the Built Environment ***Transportation Seminar Series***

Place in Travel Demand: Incorporating Objective and Subjective Land Use and Built Environment Indicators in Urban and Regional Simulations

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Date: Wednesday, February 26, 2014
Time: 11:00 AM— Noon
Location: MU 224 (Parking)
Lunch will be provided

Speaker

Konstadinos (Kostas) Goulias is a professor of transportation in the Geography Department at the University of California Santa Barbara and co-director of the GeoTrans laboratory. From 1991 to 2004 he was a professor and director of different research units at PennState, University Park. He served as the chair of the Traveler Behavior and Values Committee and Task Force on Moving Activity-based Approaches to Practice. He edited two books - Transportation Systems Planning: Methods and Applications and Transport Science and Technology Athens, authored and co-authored more than 250 papers and reports and serves on a variety of editorial and research boards, peer review panels, and committees. Kostas has a Laurea in Engineering degree (5 years and a thesis) from University of Calabria in Italy (1986), MS in Engineering from University of Michigan, Ann Arbor (1987), and Ph.D. in Civil Engineering from University of California at Davis (1991). Most of his research is in travel demand forecasting, travel behavior dynamics and microsimulation.

Abstract

A review of the policy and model building needs to perform urban and regional analyses will be presented. Examples include smart cities, urban metabolism, and urban footprint to assess smart growth scenarios. A sample of research projects that model the objective and subjective dynamics of opportunities in urban and regional simulations and their correlation with activity and travel demand will also be reviewed. This includes accessibility measurement and within a day and across years dynamics, sense of place measurement and development of emotion-sensitive mental maps, regression based spatial imputation using kriging to develop diurnal taxonomies of urban use, and network based place classifications. New analytical techniques of this type help us understand and predict activity and travel behavior, but they also point out to important gaps of knowledge. The presentation concludes with a summary of research directions that are more likely to fill science knowledge gaps, help us build more informative behavioral models for planning and engineering, and bridge research with practice.

ALL ARE WELCOME!